ABSTRACT

This invention relates to compounds which are represented by the general formula [1]

$$Ar^{1} \xrightarrow{Ar^{2}} \begin{matrix} R^{1} & O & R^{2} & R^{3} & R^{4} & R^{5} & O \\ I & II & I & I & II & H \\ CH-C-N-CH-(CH_{2})_{k}-X-Y-CH-(CH_{2})_{m}-C-N-(CH_{2})_{n}-A & [I] \end{matrix}$$

[in which A stands for a group of the following formula $[a_0]$ or $[b_0]$

Ar¹, Ar² and Ar³ stand for optionally substituted phenyl; k stands for 0 or 1; m, n and s stand for 0, 1 or 2; R¹ stands for hydrogen or optionally substituted lower alkyl; R², R³, R⁴ and R⁵ either stand for hydrogen or optionally substituted lower alkyl, or R² and R³, or R⁴ and R⁵ together stand for trimethylene and the like; R⁶⁰ stands for hydrogen, alkyl, or the like; R⁶¹ and R⁷¹ either stand for alkyl and the like, or together stand for trimethylene and the like; X stands for carbonyl or methylene; Y stands for nitrogen or methine; and Q stands for anion], and the like.

The compounds of the invention exhibit selective antagonism to muscarinic M₃ receptors, and therefore are useful as safe and effective agents showing little side effect, for treating diseases of the respiratory, urinary and digestive systems.